

Covering a roller is carried out in nine steps. Each one is governed by our internal quality system — documented procedures, checks at every stage and systematic investigation of non-conformances. The process can vary depending on the type of covering (rubber, polyurethane or silicone).

OUR 9-STEP PROCESS

1 Inspection and identification



INSPECTION ON RECEIPT

dimensions · journals · order conformance

On receipt, each roller is inspected and the required work identified: re-cover (full re-rubbering), re-surface, or mandrel (shaft) repair. Dimensions, bearing journals and conformance with the order are verified.

2 Work order creation

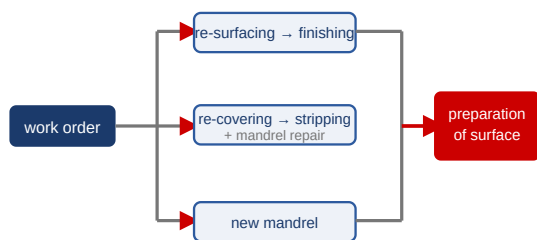


WORK ORDER

work acceptance · specifications

Soremag presents the recommended work to the customer. Following acceptance of the work, a work order is created (specifications, dimensions, surface finish, required checks) and governs the entire production.

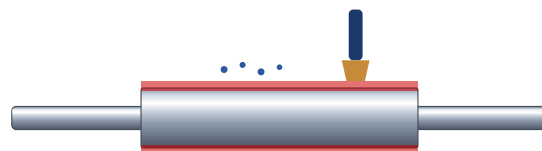
3 Production routing



grit blasting · CNC abrasive-belt grinder

Routing per the work order: **re-surfacing** → finishing; **re-covering** → stripping in the shop, then mandrel preparation or a stop at the mandrel repair shop (shaft, bearing journals); **new mandrel** → surface preparation. Surface preparation is done by grit blasting or a CNC grinder fitted with an abrasive belt (sanding belt).

4 Bonding (adhesive)



BONDING

primer + agents · brush or spray

Application of the adhesive layers (primer and bonding agents), by brush or spray, depending on the shaft material and the elastomer. The choice of adhesive is as decisive as the choice of elastomer.

5 Raw material and traceability

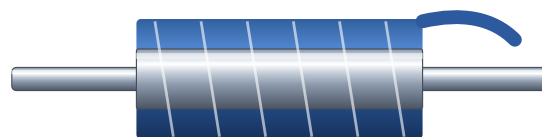


RAW MATERIAL & TRACEABILITY

lots inspected · numbered · refrigerated inventory

Soremag sources its rubber, silicone and polyurethane from leading manufacturers. On receipt, each rubber lot is inspected and numbered for traceability, then placed in refrigerated inventory. When a roller is to be covered, the rubber is taken out of the refrigerator the day before and brought back to temperature.

6 Elastomer application *Rubber, sheet application*



RUBBER — SHEETS

calendered sheets · nylon tape under compression

The temperature-conditioned rubber is cut into sheets and wound onto the roller to the required diameter, then wrapped with nylon tape to hold it under compression while awaiting curing.

6 Elastomer application *Rubber, extrusion application*



RUBBER — EXTRUSION

preheated strips under pressure · on rail

Using our rail-mounted strip extruder, the roller is mounted on a lathe in front of the extruder, which preheats the rubber and applies strips under pressure onto the mandrel to the required diameter; it is then wrapped with nylon tape to hold it under compression.

6 Elastomer application *Polyurethane, cast molding*

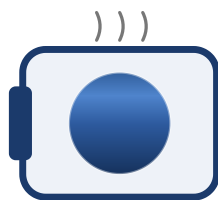


POLYURETHANE — CASTING

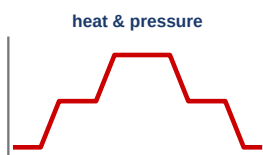
preheated mold + mandrel · gravity casting

Hot molding using a latest-generation casting machine: preheating of the mold and mandrel, calibration, selection of ingredients and color, then gravity casting.

7 Vulcanization



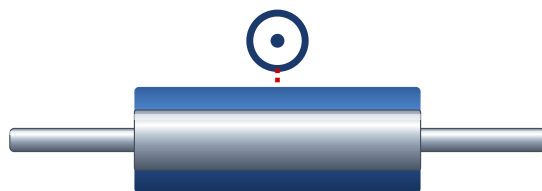
autoclave · staged cycles



stages per the recipe

- › **Rubber** — Autoclave vulcanization with several ramp-up and ramp-down stages of heat and pressure, according to the recipe, for maximized properties.
- › **Polyurethane** — Polyurethane goes through a cure then a post-cure: first heated in the oven to drive off moisture and initiate set, it is then post-cured at a temperature suited to the product to fully develop its properties.

8 Finishing



crown
concave

grooves

CNC GRINDING

shapes & grooves · controlled roughness

Nylon tape removed (rubber) or roller demolded (polyurethane), then precision machining. Soremag uses exclusively CNC grinders that correct tapers; all shapes and grooves are produced by specialized CNC for elastomer grinding: cylindrical, parabolic or hyperbolic, controlled roughness, axial/circumferential/helical grooves, or embossing.

9 Final inspection and packaging



hardness



diameter (pi tape)



packaging

RECORDED CHECKS

hardness · roughness (Ra) · diameter · visual

Checks recorded per our quality system: hardness with a durometer, roughness (Ra), diameter with a precision (pi) tape, and visual inspection. Any deviation from the work order is corrected before release. The roller is then packaged to protect it from UV, moisture and impacts.

SOREMAG STANDARD FORMULATION — OTHER VERSIONS AVAILABLE ON REQUEST

The process shown is indicative and may vary depending on the material (rubber, polyurethane or silicone), hardness and application. Non-contractual document — indicative values only. Contact Soremag for a personalized recommendation.

SOREMAG
CAOUTCHOUC - POLYURÉTHANE

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Roller covering — our 9-step process
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